

THE EFFECT OF STUDENT TEAM ACHIEVEMENT DIVISION TECHNIQUE AND THE ACHIEVEMENT MOTIVATION ON THE WRITING ACHIEVEMENT OF THE TENTH YEAR STUDENTS OF SMA NEGERI 4 SINGARAJA IN THE ACADEMIC YEAR 2011/2012

Budiarta, AK¹, Padmadewi, N², Budasi, G³

^{1,2,3}Language Education Department, Postgraduate Program
Ganesha University of Education
Singaraja, Indonesia

e-mail: agoes_budiarta@yahoo.com, padmadewi@manlogistics.com.au, yaysurya8@yahoo.com

Abstract

This thesis aimed at investigating whether the implementation of Student Team Achievement Division (STAD) technique and the students' learning motivation gave a significant effect to the students' writing achievement. The study was an experimental study by applying 2x2 factorial designs. The population was 6 classes (240 students) of grade X in SMA Negeri 4 Singaraja in the academic year 2011/2012, in which 2 classes were samples which were assigned into two groups, i.e. experimental group and control group, by *Cluster Random Sampling*. The research data were collected through tests that were analyzed by using *Statistical Two-Way Anova* and *Tukey Test*. The result shows that, first, there was a significant different on the students' writing achievement between the students who were taught by using STAD Technique and Conventional Technique. Second, there was a significant interactional effect on the students' writing achievement between the technique applied and the students' learning motivation. Third, there was a significant difference on the students' writing achievement between the students who had high learning motivation when they were taught by using STAD Technique and Conventional Technique. Fourth, there was no any significant difference between the students' writing achievement of the students who had low learning motivation when they were taught by using STAD Technique and Conventional Technique. Five, there is a significant difference on students' writing achievement between the students with high achievement motivation and the students with low achievement motivation taught by using STAD Technique. The last, there is a significant difference on students' writing achievement between the students with high achievement motivation and the students with low achievement motivation taught by conventional technique.

Key words: Student Team Achievement Division (STAD) technique, achievement motivation, writing achievement.

INTRODUCTION

As an international language, English is a medium of interaction and communication among people from different parts of the world. The four language skills: listening, speaking, reading, and writing are used for practical purposes, as a medium to convey

meanings and ideas. Those abilities must be seen as a whole ability because they are integrated with each other.

The School-Based Curriculum of Senior High School stated that teaching English focuses on the mastery of four

language skills, namely: Listening, speaking, reading, and writing. Raimes (1983) states that the other language components such as pronunciation, grammar, and vocabulary are also taught to support language skills' development. These skills are taught to support language skills' development. These skills are taught in an integrated way because one skill cannot be performed without the others. In addition, from everyday experience, oral and written languages are used together. It is likely that listening may precede speaking and reading may precede writing. For instance, it is impossible to engage conversation if someone is not listening and there is possibility when someone reads an article he or she will have a small discussion or give comment on it. In other case, someone may write a report reading some articles. From these things, teaching those four skills in an integrated way will enable the students to use the language communicatively.

Writing is one of the four language skills that should be mastered because it is one of the forms of communication. According to Raimes (1983), teaching

writing is important because of three reasons. The first is that writing reinforces the grammatical structure, idiom, and vocabulary that teacher has been working within the class. The second reason is when the student writes. They have a chance to be adventurous with the language. The third reason is that the students become more involved in the language, involved with themselves and their readers. Due to the facts above, we can see clearly the to overall objectives of teaching writing are in order to enable the students to express their ideas and thoughts in a written form.

Since writing is a complex activity, it is considered difficult for the students to write good writing in short time (Marhaeni (2005)). According to Chakraverty and Gantum (2000) writing is a reflective activity that requires enough time to think about the specific topic, to analyze and to classify any background knowledge. It means writing integrates several processes, such as:

finding topic, providing information to support the topic, classifying ideas, organizing ideas in logical sequence and implementing linguistics knowledge. From Marhaeni (2005) and Chakraverty and Gantum (2001) point of views, it is inferred that writing is a continuous process that needs several stages. Consequently, the students must be given ample time to finish their writing assignment. Therefore, students who engage in a writing activity tend to face many problems during the process of writing.

Most of the students find it difficult to develop ideas in their minds. Actually, they might have something to state in their mind, but they are often confused to express and develop their ideas into a good writing. It is such a common problem that is encountered by most of English teachers in teaching writing. Campbell (2002) claims that the biggest problem that students have in writing is that they cannot put their ideas and facts into paper since they are afraid if their ideas cannot be written correctly in terms of grammar. This condition leads the students to a state of anxiety. In addition, Chakraverty and Gautum (2000) state further that one of the students' problems is that they have difficulty in arranging information or ideas logically to achieve coherence in their writing, which is the foremost requirement in writing.

Furthermore, there are no limitations for the teacher to manage the class especially in teaching and learning process in writing. One way which can be done by the teacher is Cooperative Learning Method. Conducting the process of teaching and learning in the classroom may be a bit problematic since the teacher has students who are different from each other. But, through Cooperative Learning Method, Cinelli (1994) states that problem can be solved since Cooperative Learning Method becomes a good solution and consider as an effective way of teaching. In Cooperative Learning Method, the differences of each student can be covered and they may share all information and work together in the group to produce or to accomplish the tasks given by the teacher.

There are some related theories, which can support the strategies in this

case, Cooperative Learning Method. Cooperative learning is both an instructional technique and teaching philosophy that encourages students to work together to maximize learning (Cinelli, 1994). In its simplest form, cooperative learning is a type of group work in which two or more students interact, with the common goal of mastering specific academic material. However, it differs from other forms of group work in several important ways that will be described briefly in this review. Much more detailed accounts of cooperative learning are provided in the various references mentioned in this review (Johnson, 1985). Cooperative learning encourages students to work in groups and teams. The core aim of this group or team is to achieve a specific task. Groups are created at beginning of the semester, for some specific semester activity, or for any other collaborative purpose. In this new method of learning, students learn much more than what they can learn in the typical mode of learning.

According to Johnson and Johnson (1989), there are five elements of cooperative learning method. Though there are more than five, but the most basic elements or pillars of cooperative learning method are: individual accountability, positive interdependence, face-to-face promotive interaction, Group processing, and Interpersonal and Small group skills. Positive interdependence refers to the 'feel' of each other. Students feel that they cannot work without the absence or one or more group members. The instructor can set the mutual goals in order to make the group move in a specific direction. Individual accountability refers to specific and group assessment that results in the skills and outcomes of each student and a whole group. Similarly, face-to-face promotive interaction encourages the students of a group by sharing and helping each other on specific topics. There can be one or more students of a group who don't have a good idea about some specific topic. But there can be a third student who is master of that topic. Interpersonal and small group skills refer to the social skills that each and every student of the group should have. It is necessary in order to have true

and long term success of the group. Group processing refers to the assessment and remarking of the capabilities and actions of each group. For example, instructor can take three or four students from a group and can make an outline of what had made the group successful. Furthermore, the instructor can tell what points and factors can make the group even more successful in the future.

In addition, Kagan (1985) proposed his model about cooperative learning method in 1985 in his book 'Cooperative Learning Structures'. In his model, he mainly advocated two basic principles. He first stated that the world is pretty much competitive while in some fields it isn't that much. However, you have to be fully equipped with knowledge in the fields you are going to face. Coming to the second principle, he wanted to have a learning method which was a mixture between competitive and individualistic, with cooperative classroom organization so that it could help in preparing the students for complete sort of social situations.

Slavin (1995) suggests that cooperative learning is not only a great way of learning but it is also a very vast field of research and analysis. Consequent to research and analysis, the design section exists which suggests the designing of course outline and groups' tasks. He also suggests that cooperative learning is doubtlessly a great tool for handicapped and disabled students. Cooperative learning method encourages these students and molds them to work in a professional environment. Cooperative learning method of disabled and normal students is another great way of encouraging disabled students. According to Slavin (1995), when disabled and handicapped students work in mainstream and heterogeneous environments, they learn in a more productive and skillful manner.

In this study, the technique of Cooperative Learning Method used was Student Team Achievement Division (STAD) Technique. The researcher choose this technique because this type of cooperative learning is most available done in the class sample. In STAD the member of the group is heterogenic. According to

Slavin (1990), in STAD Technique students are assigned to four- five member learning teams that are mixed in performance level, gender, and ethnicity. The teacher presents a lesson, and then students work within their teams to make sure that all team members have mastered the lesson. Finally, all students take individual quizzes on the material, at which time they may not help one another.

Students' quiz scores are compared to their own past averages, and points are awarded on the basis of the degree to which students meet or exceed their own earlier performance. These points are then summed to form team scores, and teams that meet certain criteria may earn certificates or other rewards.

Relating to the role of achievement motivation in foreign language learning, Gardner (2001) in his socio-educational model states motivation to learn the second language is viewed as requiring three elements. *First*, a motivated individual expends effort to learn the language. That is, there is a persistent and consistent attempt to learn the material by doing homework, by seeking out opportunities to learn more, by doing extra work, etc. *Second*, the motivated individual wants to achieve the goal. Such an individual will express the desire to succeed, and will strive to achieve success. *Third*, the motivated individual will enjoy the task of learning the language. Such an individual will say that it is fun, challenging, and enjoyable, even though at times enthusiasm may be less than at other times.

By considering how important the role of achievement motivation in learning foreign language is, the teachers should be able to create learning conditions that can raise students' achievement motivation in foreign language learning. In other words, the teachers play main role in creating conducive condition that facilitates the students to learn (Narayan, 2008). Creating classroom climate in which there is a sense of belonging and everyone is valued and respected is one way that can be applied. It is expected that the teachers must be close

and give their attention to their students, so that, the students feel secure in learning.

Moreover, this research focused on the effect of cooperative learning STAD Technique and achievement motivation on students' writing achievement. Specifically, this study tried to find the evidences on whether the implementation of cooperative learning STAD Technique and the students' achievement motivation can give a significant effect on the students' writing achievement. This study was conducted in SMAN 4 Singaraja in the academic year 2011/2012. By considering the importance of writing skills for students at any level and realizing that many students still have difficulty in writing; the researcher conducted a study on improving students' writing achievement based on the chosen variables.

The result of this study was expected to give two positive contributions, practically and theoretically. For practical purpose, this study was expected to give great contribution to the teaching and learning process as well as to improve the students' motivation in learning English. For theoretical purpose, this study was expected to give contribution to learning theories development of STAD Technique in the classroom. Further, it was expected to give chance for the other researcher to conduct similar research.

METHOD

The study was an experimental study by applying 2x2 factorial designs. The population was 6 classes (240 students) of grade X in SMA Negeri 4 Singaraja in the academic year 2011/2012, in which 2 classes were samples which were assigned into two groups, i.e. experimental group and control group, by *Cluster Random Sampling*. The research data were collected through tests that were analyzed by using *Statistical Two-Way Anova* and *Tukey Test*.

In the process of data collection, some techniques were used. Each technique was suited with the intended data. They are presented in Table 01.

Table 01. Data Collection Techniques

N o	Kinds of Data	Technique	Instrument
1.	Students' writing achievement	Test	Writing achievement test (post test)
2.	Students' achievement motivation	Test	Questioner
3.	Students' activities	Observation	Observation sheet
4.	Obstacles during the process of teaching and learning	Observation	Teacher's diary

However, since two ways ANOVA is a parametric statistical test, before the researcher further analyzing data, the data should be tested in order to find out wither it has normal distribution and homogeneity of variance or not. Gay (2009) states that, having normal distribution and homogeneity of variance is necessary criteria to conduct parametric statistical test.

The normality testing was done in order to know whether the obtained data were distributed normally or not. The Kolmogorov_Smirnov statistic was used as the measurement to investigate the normality. On the other hand, the test of homogeneity was done to investigate whether or not the variances were homogeneous. Levene's test of Equality of Error variance was used in measuring the homogeneity of variance data. In Levene statistic test, the variances of groups were considered homogenous if the significance value is higher than 0.05.

FINDINGS AND DISCUSSION

The discussion of the findings has parts such as: first, to discuss about the significant effect of STAD and conventional technique on the student's writing achievement; second, to discuss about the interactional technique (STAD Technique and Conventional Technique) and student's achievement motivation on the student's writing achievement; third, to discuss about the significant difference on the student's writing achievement between the students with achievement motivation taught by using STAD Technique and conventional technique; fourth, to discuss about the significant difference between the students' with low achievement motivation taught by using STAD technique and conventional technique; fifth, to discuss the significant

difference on the students achievement between the students with high achievement motivation and the students with low achievement motivation taught by using STAD Technique; sixth, to discuss about the significant difference on students' writing achievement between the students with high achievement motivation and students with low achievement motivation taught by using conventional technique.

From the steps above, the statistical analysis to find significant difference between cooperative learning method and conventional learning technique in improving writing achievement, it was found that FA (78.47) was higher than Fcv (76.17). Therefore, Ho was rejected. This mean, regardless the learning motivation factors, there was a significant difference between the writing achievement of the students who were taught by STAD Technique and those who were taught by conventional technique. It means that H1 which stated "there is a significant difference in students' writing achievement between the students taught by using STAD Technique and Conventional Technique", was accepted. It can be concluded that there was a significant effect in students' writing achievement between students taught by using STAD Technique and Conventional Technique, where the mean score of students taught by using STAD Technique and Conventional Technique, where the mean score of students who were taught by using STAD Technique 78.4337 was higher than the mean score of students' writing achievement for students taught by using Conventional Technique 76.1447.

The hypothesis testing that was used in this study was Two-way ANOVA as the followings:

Table 02. Univariate Analysis of Variance Test of Between-Subjects effects**Tests of Between-Subjects Effects**

Dependent Variable:score

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	736.516 ^a	3	245.505	24.121	.000
Intercept	358416.917	1	358416.917	3.522E4	.000
Group	78.593	1	78.593	7.722	.007
Motivationlevel	398.713	1	398.713	39.174	.000
group * motivation level	259.210	1	259.210	25.468	.000
Error	569.963	56	10.178		
Total	359723.396	60			
Corrected Total	1306.479	59			

a. R Squared = .564 (Adjusted R Squared = .540)

Based on the analysis above, the findings can be summarized as follows:

a. Related to the first research question ;

- The difference test of the students' achievement based on the treatment given. If p value is higher than 0.05 ($p \geq 0.05$), H_0 is received or the mean score of all populations are same. If p value is lower than 0.05 ($p \leq 0.05$), H_0 is rejected or the mean score of all populations are different. From the output above, it is seen that F group 7.722 and $p = 0.000$. It means that the mean score of all populations are different significantly. It means that score there is significant different between the achievement of the students in treatment and control.

- Difference test of the students' achievement based on the level of motivation. If p value is higher than 0.05 ($p \geq 0.05$), H_0 is received or the mean score of all populations are same. If p value is lower than 0.05 ($p \leq 0.05$), H_0 is rejected or the mean score of all populations are different. From the output above, it is seen that F motion level 39.174 and $p = 0.000$. It means that the mean score of all populations are different significantly. It means that there is a

significant different between the achievement of the high and low motivated students.

b. Related to the second research question;

- Interactions between teaching techniques and motivation. If p value is higher than 0.05 ($p \geq 0.05$), it means that H_0 is received. If p value is lower than 0.05 ($p \leq 0.05$), it means that H_0 is rejected. From the output, it is seen that F value=25.468 and $p=0.000$. It means that there is an interaction between teaching techniques and level of motivation that affect the students' achievement.

Regarding moderator variable, the writing achievement of the students who had high learning motivation, who were taught by cooperative learning method was higher than who were taught by conventional learning technique. This finding proved that cooperative learning method could increase English writing achievement of the students of SMA Negeri 4 Singaraja. Cooperative learning method was very effective, because by using this technique, students could learn and teach one another among the students. The basic concepts of

cooperative learning enable the students to develop according to their ability and their talent. Shlomo Sharan. (1999) states that some steps in cooperative learning can give good chance for the students to increase their skills and ability in English writing, as: *first*, forming the groups. *Second*, reminding students of the academic task (what they are to learn) and the cooperative goal structure (the rewards for learning). *Third*, reminding students of your expectations of them, particularly in relation to helping one another learn. *Fourth*, providing students with resources if this is necessary. *Five*, circulating to provide assistance as required, to monitor the activities and learning of the students, and to make notes of matters that will need to be dealt with once the group sessions have finished. *The last*, evaluating student achievement and helping them assess how well they collaborated with one another.

Statistical analysis showed that conventional learning could not affect positively toward the writing achievement of the tenth grade students of SMA Negeri 4 Singaraja. Conventional learning did not give chance for the students to develop autonomously. This technique places the students as an object of learning or as a receiver of information passively. In learning activities, most of the students study individually, students study the lesson by receiving, noting, and memorizing the material that is seldom related to their real life, and also the material that has been taught tends to be theoretical and abstract. Besides that, students do not have many opportunities to improve their achievement because their comprehension is directly punished by quantitative scores for every student's work without giving opportunities to the students for improving.

The result of hypothesis testing that analyzed whether there was significant different achievement on students who had high learning motivation between those who were taught by cooperative learning method and those who were taught by conventional learning technique or not. It could be seen

through the mean of writing achievement for the experimental group which was 83.09 and 76.64 for the control group. It means that the writing achievement of the high learning motivation students who were taught by cooperative learning method was *higher than* the writing achievement of the high learning motivation that were taught by conventional learning technique. Tukey Testing showed that $Q_1 = 9.49$ and $Q_{table} = 2, 83$, this means that $Q_1 \geq Q_{table}$. There was a significant difference of achievement on students who had high learning motivation between those who were taught by cooperative learning method and those who were taught by conventional learning technique. This statistical analysis proved that the writing achievement of the students was not only affected the learning technique but also it was affected by the learning motivation.

The students with high achievement motivation got the characteristics as follows. They are enthusiastic in doing a particular job. They prefer to choose a challenging job. Therefore, the students with high achievement motivation will choose an activity that challenges them to express their fullest potential. The next characteristic, the students with high achievement motivation will choose a task which is not extremely difficult. They prefer to find a task which is challenging to their potential skills and work hard to achieve the goals.

It is an interesting phenomenon in relating high learning motivation with cooperative learning in learning process. It can be the characteristics that have some similarities to the characteristics in cooperative learning motivation students. Cooperative learning provides chance for the students to look at the progression of information or ideas in their writing to form coherent writing. It can also help the students in composing and revising their writing to produce writing that is coherent. The students know their strengths, progress, and weaknesses when producing their writing. They also face challenges or problems along a learning process and solve those problems by knowing the patterns in cooperative learning. This indicates cooperative learning provides

chance for the students to force themselves to reach excellent standard goal.

It can be concluded that cooperative learning can increase writing achievement if it is used for the students who have high learning motivation. For the students who have low learning motivation, cooperative learning can also increase writing achievement, provided that they are made sure to be active to try the new technique. This effort can be done by building their self-confidence that cooperative learning is not too complicated, on the contrary, it can help the students to increase their writing achievement. If they are used to learning by cooperative learning, they will be able to increase their learning motivation while they will be able to increase their writing achievement.

Then, whether there is interaction between learning motivation and writing achievement, the hypothesis testing showed that $F \text{ value} = 25.468$ and $p = 0.000$, it means that there is an interaction between cooperative learning and level of learning motivation that effect the students' achievement. This testing proved that there was an interaction between the technique that was used and learning motivation toward the students' English writing achievement.

The discussions indicate that there is interaction between writing achievement, cooperative learning, and learning motivation. English is one of the subjects that possess very clear aim i.e. to be able to use English as a means of communication in oral or write language. One of the advantages of cooperative learning is widely giving chances for the students to practice writing which includes organization, content knowledge, grammar, spelling, ad neatness. Using cooperative learning, students can ask and answer among their friends under teacher's guidance.

The student who has high motivation is fond of challenges and always looks for the newest information. So that, he/she always hopes feedbacks that he/she uses to increase his/her achievement.

All the above discussions about English writing achievement, cooperative learning method, conventional learning technique, and learning achievement

motivation have explained that there is interaction among them. And writing is considered as cognitive and creative process. Cognitive process is seen on how the students produce ideas and arrange those ideas as clear and interesting as possible so that the readers will understand clearly the writing product. A writer is also expected to create creative writing. The creative writing can be seen from the originality of the ideas. So, the writers should use their imagination to create creative writing. The creative writers are always able to maximize information coming from environment and use the information to inspire their writing so that they create new ideas.

STAD Technique enables the students to make reflection on their strengths, progress, and weaknesses when producing their writing so that the students can monitor their learning progress. Besides that, the students are active learners in the learning process, rather than recipients of information since they are engaged in learning by doing. Those conditions will provide students-centered learning and meaningful learning experiences for the students.

In another point, achievement motivation is a drive to reach excellent standard. High achievement motivated students like new and challenging things. Moreover, they usually set goal of their task in learning. Therefore, high achievement motivated students need new things (e.i feedback) as the reflection of their progress to reach goals.

From all the characteristics of the aspects mentioned, namely: writing achievement, teaching technique (STAD Technique and conventional technique), and achievement motivation, indicates all of the aspects closely related to each other and also explain the phenomenon of this research. Student Team Achievement Division technique provides great chance for the students to create creative writing since it provides chance for the students to look at the progression of information or ideas in their writing. Student Team Achievement Division technique emphasizes on the process to produce qualified writing products are appropriate for

the high achievement motivated students. The characteristics of high achievement motivated students are suitable with characteristics of creative students who like new information (feedback) to inspire their writing. At the end, it can be concluded that creativity develops well through STAD Technique. The students who have high achievement motivation can reach optimum writing achievement if they are taught by using STAD Technique.

CONCLUSION

Based on the research findings discussed in the previous chapter, it is concluded that the teaching technique; STAD and Conventional Technique, and the achievement motivation affect significantly on students' writing achievement. In detail, the conclusion can be formulated as follows: first, there was a significant different on the students' writing achievement between the students who were taught by using STAD Technique and Conventional Technique. Second, there was a significant interactional effect on the students' writing achievement between the technique applied and the students' learning motivation. Third, there was a

significant difference on the students' writing achievement between the students who had high learning motivation when they were taught by using STAD Technique and Conventional Technique. Fourth, there was no any significant difference between the students' writing achievement of the students who had low learning motivation when they were taught by using STAD Technique and Conventional Technique. Five, there is a significant difference on students' writing achievement between the students with high achievement motivation and the students with low achievement motivation taught by using STAD Technique. The last, there is a significant difference on students' writing achievement between the students with high achievement motivation and the students with low achievement motivation taught by conventional technique.

REFERENCES

- Cakraverty, A. and Gautum K. 2000. Dynamic of Writing. Available at <http://exchanges.states.gov/forum/vols38/no3/pp22.htm>. accessed on 14th November 2011.
- Campbell, Allen. 2002. *Free writing technique*. Copyright Lynchburg College: online source.
- Cinelli, B. 1994. *Applying Cooperative Learning in Health Educational Practice*. Journal of School Health, 64(3), 99-102.
- Gay, L. R. 2009. *Educational Research. Competencies for Analysis and Application*. New Jersey: Pearson Education Inc.
- Johnson, R.T. & Johnson, D.W. 1989. *Cooperation and Competition: Theory and Research*, Edina, MN: Interaction Book Company.
- Jhonshon, R. T. 1985. Effect of Cooperative, Competitive, and Individualistic goal Structures on Computer Assisted Instruction. Journal of Educational Psychology, 77(6), 668-677. Accessed on 27th September 2011.
- Kagan, S. *Cooperative Learning*. San Clemente, CA: Kagan Publishing. 1985.
- Marhaeni, A.A. I. N. 2005. *Pengaruh Assesment Fort Polio dan Motivasi Berprestasi dalam Belajar Bahasa Inggris Terhadap Kemampuan Menulis Dalam Bahasa Inggris*. Unpublished (dissertation). Jakarta: Program

- Pasca Sarjana Universitas Negeri
Jakarta.
- Raimes, A. 1983. *Technique in Teaching Writing*. New York: Oxford University Press.
- Sharan, Shlomo. 1999. *Handbook of Cooperative Learning Methods*. Praeger Westport, Connecticut London.
- Slavin, R. E. 1995. *Cooperative Learning*. Second Edition. USA: A Simon Schuster Company.
- Slavin, R. E. 1990. *Co-operative Learning*. New York: Longman.